



Conserved Domains

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Conserved domains on [\[gi224925|pf01204204A\]](#)

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barnase

Graphical summary



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List of domain hits

	Description	Accession	Multi-dom	E-value
I cd00933, barnase, Barnase, a member of the family of homologous microbial ribonucleases, catalyses the		22493	no	1e-51
Barnase, a member of the family of homologous microbial ribonucleases, catalyses the cleavage of single-stranded RNA via a two-step mechanism thought to be similar to that of pancreatic ribonuclease. The mechanism involves a transesterification to give a 2', 3'-cyclic phosphate intermediate, followed by hydrolysis to yield a 3' nucleotide. The active site residues His and Glu act as general acid-base groups during catalysis, while the Arg and Lys residues are important in binding the reactive phosphate, the latter probably binding the phosphate in the transition state. Barnase, a small 69 residue intracellular protein is a natural inhibitor of Barnase.				
CD Length: 107 Bit Score: 197.12 E-value: 1e-51				
gi_224925	1: PTETDVAQYLCYTHKLPDNYITREAAQALSWVAKENLADVAAGKRTCCDLEENRSGALPCKSTFRTNREADINPTLEPR			
cd00933	1: TMSFGKRL/CLTCHLPSTITLQAKELQNDKPTNLSLQAPPTLPPTFTHDPLPAAGSTPTDPAIPYAGDIP			
gi_224925	90: NRPRLYSQWLYNTIDYQFFKTR			
cd00933	90: GAKRLIYKAGLLFKTIDHPTPTLP			
I cd00389, microbial_RNases, microbial_RNases Ribonucleases (RNases) cleave phosphodiester bonds in RNA and are		29490	no	2e-16
I pfam00545, Ribonuclease, ribonuclease		109596	no	4e-21
I COG4290, COG4290, Guanyl-specific ribonuclease Sa [Nucleotide transport and metabolism]		34012	no	7e-04

Blast search parameters

Options: Database: CDD Low complexity filter: yes E-value threshold: 0.010 Max. hits: 50
Data Source: Precalculated data
System: Search creator: newblast Software: blastp 2.2.20+ Service: rpsblast

References:

- Marchler-Bauer A et al. (2007), "CDD: a conserved domain database for interactive domain family analysis", *Nucleic Acids Res.* 35(D):237-240.
- Marchler-Bauer A et al. (2005), "CDD: a Conserved Domain Database for protein classification.", *Nucleic Acids Res.* 33(D):192-196.
- Marchler-Bauer A, Bryant SH (2004), "CD-Search: protein domain annotations on the fly", *Nucleic Acids Res.* 32(W):327-331.

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